Speculum Anni

OR,

A GLASSE, in which you may behold the revolution of the yeare of our Lord God MDCXLIX.

Being the first after *Bissextile* or Leap-yeare.

Shewing all the notable Aspects of the Planets with the Moon, as also among themselves, with the true place of the Sunne and Moone, in Signes, degrees, and minutes, for every day in the yeare, and the true place of the other Planets for every fifth day.

Unto which are added divers Tables both Astronomicall and Nauticall, exactly calculated for the same yeare.

Framed especially for the Longitude and Latitude of the famous and renowned City of London, and may generally be used through the whole Kingdome of England without any notable difference.

By William Lilly Practitioner in the Mathematicks.

LONDON,

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Vulgar Notes and moveable Feasts according to the Julian and Gregorian Accounts for the yeare, 1649.

English account.			Forraign account.	
	16	The Golden Number,	16	
	6	The Circle of the Sun.	6	
	☙	The Dominicall Letter.	☙	
	26	The Epact.	16	
	2	The Roman Indiction,	2	
February	4	Shrove Sunday.	February	14
March.	25	Easter day.	April	4
May	3	Ascention day.	May	13
May	13	Whitsunday.	May	23
May	20	Trinity Sunday.	May	30
	27.	Sundaies after Trinity.		25

The foure Termes and their returnes.

Hillary Terme begins *January* 23. ends *Febru.* 12.

1. Octab. Hillar. } 3. Craft. Purificat.
2. Quind. Hillar. } 4. Octab. Pasch.

Easter Terme begins *April* 11. ends *May* 7.

1. Quind. Pasch. } 3. Mense Pasch.
2. Tres Pasch. } 4. Quinq. Pasch.
5. Crastino Ascensionis.

Trinity Terme begins *May* 25. ends *June* 13.

1. Craft. Trinitat. } 3. Quind. Trinitat.
2. Octab. Trinitat. } 4. Tres Trinitat.

Michaelmas Terme begins *Octob.* 23. ends *Nov.* 28.

1. Tres Michael. } 4. Craft. Martin.
3 Mense Michael. } 5. Octab. Martin.
3. Craft. Anima. } 6. Quind. Martin.

806.268

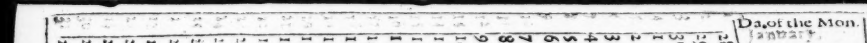
Da. of the Mon.

Table shewing the Age of the Moon every day in the yeare

and is to be used with the Tide Table following.

Day of the Mon.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	28	29	28	29	30	1	2	3	5	5	7	8
	29	1	29	1	1	2	3	4	6	6	8	9
	30	2	30	2	2	3	4	5	7	7	9	10
	1	3	1	3	3	4	5	6	8	8	10	11
	2	4	2	4	4	5	6	7	9	9	11	12
	3	5	3	5	5	6	7	8	10	10	12	13
	4	6	4	6	6	7	8	9	11	11	13	14
	5	7	5	7	7	8	9	10	12	12	14	15
	6	8	9	8	8	9	10	11	13	13	15	16
	7	9	7	9	9	10	11	12	14	14	16	17
	8	10	8	10	10	11	12	13	15	15	17	18
	9	11	9	11	11	12	13	14	16	16	18	19
	10	12	10	12	12	13	14	15	17	17	19	20
	11	13	11	13	13	14	15	16	18	18	20	21
	12	14	12	14	14	15	16	17	19	19	21	22
	13	15	13	15	15	16	17	18	20	20	22	23
	14	16	14	16	16	17	18	19	21	21	23	24
	15	17	15	17	17	18	19	20	22	22	24	25
	16	18	16	18	18	19	20	21	23	23	25	26
	17	19	17	19	19	20	21	22	24	24	26	27
	18	20	18	20	20	21	22	23	25	25	27	28
	19	21	19	21	21	22	23	24	26	26	28	29
	20	22	20	22	22	23	24	25	27	27	29	30
	21	23	21	23	23	24	25	26	28	28	1	1
	22	24	22	24	24	25	26	27	29	29	2	2
	23	25	23	25	25	26	27	28	30	1	3	3
	24	26	24	26	26	27	28	29	1	2	4	4
	25	27	25	27	27	28	29	1	2	3	5	5
	26		26	28	28	29	30	2	3	4	6	6
	27		27	29	29	1	1	3	4	5	7	7
	28		28		30		2	4		6		8

The use of this table to find the ☾ age.

THe Table consisteth of 13 Columnes, in the first of which towards the left hand is placed the da. of the Moneth in red Characters, and in the other 12 the ☾ age, in the front or head of the Table is placed the names of the Moneths in red Letters likewise.

The use of the table is thus, find the Month in the head of the Table, and the day in the first Columne, and in the common angle you have your desire. Example: I would know the ☾ age the 9 of *Ian.* first I find *Ianu.* in the head of the Table, and 9 in the first Column, wherefore I guide my eye downe from *January*, till I come against 9 in the first Columne, where I find 6 which is the age of the Moone on that day: and so of the rest.

The Anatomy of mans body, as the parts thereof are Astrologically attributed to the twelve Signes of the Zodiack.

♈ Aries, Head and face.

♉ Taurus, Necke and throat.

♋ Cancer, Breast, stomack, and ribs.

♍ Virgo, Bowels and Belly.

♏ Scorpio, Secret members.

♑ Capricorn, The knees.

♊ Gemini, Armes and shoulders.

♌ Leo, Heart and back.

♎ Libra, Reines and Loynes.

♐ Sagittarius, The Thighes

♒ Aquarius, The Legges

♓ Pisces, The feet.

The Characters of the seven Planets

♄ Saturne, ♃ Jupiter, ♂ Mars, ☉ Sol, ♀ Venus, ☿ Mercury, ☾ Luna.

The Characters of the five Aspects.

☌ A Conjunction when Planets are in one signe and degree.

☍ An Oppositon when they are halfe the heavens distant.

△ A Trine when they are distant 4 signes, or 120 degrees.

□ A Quartile when they are 3 Signes distant, or 9 degrees, which is $\frac{1}{4}$ of the whole heavens.

⚹ A Sextile when Planets are 2 Signes or 60 degrees distant.

January hath xxxi. daies.

New moon the 2 day, 14 min. past 11 at night.
First quarter the 10 day, 5 min. past 8 at night.
Full moone the 18 day, 22 min. past 1 in the afternoon.
Last quarter the 25 day, 31 min. past 8 in the morning.

1	a	New years da.	♍	3. 11	21	♍	53	♄	10	10	♊	11	d
2	b			16. 55	22		54	♅	9	12	♎	12	e
3	c		♒	0. 26	23		55	♂	16	47	♍	13	f
4	d	△ ♅ ☾ 3 a.		13. 40	24		56	♀	24	12	♒	14	g
5	e	☌ ♀ ☾ 9 a.		26. 36	25		58	☿	2	45	♍	15	a
6	f	Twelfth day,	♓	9. 14	26		59	♄	9	59	♊	16	b
7	g	1 Sun aft. Ep.		21. 33	27		59	♅	9	19	♎	17	c
8	a	□ ☿ ☾ 6 p.	♈	3. 38	29		1	♂	16	52	♍	18	d
9	b	✶ ♄ ☾ at mi.		15. 32	0	♒	2	♀	0	22	♓	19	e
10	c	✶ ♁ ☾ 9 p.		26. 20	1		3	☿	9	8	♍	20	f
11	d	△ ☿ ☾ 3 p.	♉	9	72		4	♄	9	44	♊	21	g
12	e	△ ♂ ☾ 3 a.		21.	03		6	♅	9	21	♎	22	a
13	f	Hilary.	♊	3.	24		7	♂	16	32	♍	23	b
14	g	2 Sun. aft. Ep.		15.	21	5	7	♀	6	31	♓	24	c
15	a	☌ ☿ 4 p.		28.	06		9	☿	16	2	♍	25	d
16	b	✶ ♂ ☾ 9 p.	♋	11.	07		10	♄	9	35	♊	26	e
17	c	☌ ♅ 2 p.		24.	23	8	11	♅	9	18	♎	27	f
18	d	✶ ♄ ☾ 2 p.	♌	8.	89		12	♂	15	52	♍	28	g
19	e			22.	5	10	13	♀	12	39	♓	29	a
20	f	□ ♄ ☾ 4 p.	♍	6.	34	11	14	☿	23	20	♍	30	b
21	g	Septuagesima.		20.	57	12	15	♄	9	29	♊	31	c
22	a	☌ ♅ ☾ 7 p.	♎	5.	25	13	15	♅	9	12	♎	Feb.	
23	b	Sexag. begin.		19.	46	14	16	♂	14	51	♍	2	e
24	c	□ ☿ ☾ 3 a.	♏	4.	01	5	17	♀	18	46	♓	3	f
25	d	△ ♀ ☾ 3 p.		18.	2	16	18	☿	29	22	♍	4	g
26	e	✶ ☿ ☾ 1 p.	♐	2.	01	7	19	♄	9	25	♊	5	a
27	f	☌ ♄ ☾ 1 a.		15.	28	18	20	♅	9	2	♎	6	b
28	g	Sexagesima.		29.	24	19	20	♂	13	36	♍	7	c
29	a	△ ♂ ☾ 1 p.	♑	12.	41	20	21	♀	24	51	♓	8	d
30	b	✶ ♀ ☾ at no.		26.	0	21	22	☿	8	50	♒	9	e
31	c	☿ ☾ 2 p.	♒	9.	8	22	22	♄	9	25	♊	10	f

February hath xxviii. daies.

New moon the 1 day, 27 min. past 2 afternoon.
First quarter the 9 day, 48 min. past 4 afternoon.
Full Moon the 17 day, 21 min. past 1 in the morn.
Last Quarter the 23 day, 13 min. past 5 at night.

1	d		♒	22	5	23	♒	23	♑	8	48	♎	11	g
2	e	Purification	♓	4	49	24		24	♂	12	4	♍	12	a
3	f	♌ ♂ ☾ a. 1		17	19	25		24	♀	0	55	♈	13	b
4	g	Shrove Sund.		29	35	26		25	☿	17	5	♒	14	c
5	a	✶ ♄ ☾ 7 a.	♈	11	38	27		25	♄	9	28	♊	15	d
6	b	✶ ☿ ☾ 4 a.		23	29	28		26	♑	8	27	♎	16	e
7	c	△ ♂ ☾ 9 p.	♉	5	19	29		26	♂	10	8	♍	17	f
8	d			17	60	♓		27	♀	6	58	♈	18	g
9	e	□ ☿ ☾ 4 a.		28	56	1		27	♀	25	43	♒	19	a
10	f	♌ ♄ ☾ 1 a.	♊	10	57	2		27	♄	9	33	♊	20	b
11	g	☉ 1 sun. in Len.		23	143			28	♑	8	2	♎	21	c
12	a	Perme ends.	♋	5	51	4		28	♂	8	10	♍	22	d
13	b			18	53	5		28	♀	12	57	♈	23	e
14	c	**Valentine.**	♌	2	23	6		29	♀	4	48	♓	24	f
15	d			16	20	7		29	♄	9	41	♊	25	g
16	e	♌ ♂ ☾ 9 p.	♍	0	42	8		29	♑	7	34	♎	26	a
17	f	□ ♄ ☾ 2 a.		15	23	9		29	♂	6	10	♍	27	b
18	g	☉ 2 sun. in Len.	♎	0	15	10		29	♀	18	55	♈	28	c
19	a	♌ ♀ ☾ 8 p.		15	0	11		29	♀	14	13	♓	March	
20	b	✶ ♂ ☾ 8 p.		29	53	12		29	♄	9	52	♊	2	c
21	c	△ ♀ ☾ 6 p.	♏	14	25	13		29	♑	7	4	♎	3	d
22	d	□ ♂ ☾ 9 p.		28	40	14		29	♂	4	17	♍	4	e
23	e		♐	12	36	15		29	♀	24	50	♈	5	f
24	f	Matthias.		26	14	16		29	♀	23	56	♓	6	g
25	g	☉ 3 sun. in Len.	♑	9	36	17		29	♄	10	6	♊	7	a
26	a	□ ♀ ☾ 11 p.		22	45	18		29	♑	6	29	♎	8	b
27	b	△ ♄ ☾ 8 p.	♒	5	42	9		29	♂	2	34	♍	9	c
28	c			18	29	20		28	♀	0	44	♉	10	d

March hath xxxi. daies.

New moone the 3 day, 47 min. past 6 in the morn.
First quarter the 10 day, 33 min. past 11 at noon.
Full moon the 18 day 57 min. past 10 in the morn.
Last quarter the 25 day, 56 min. past 2 in the morn.

1	D	David.	♓	19	6	21	♓	28	☿	3	34	♈	11	g
2	E	☐ ♄ ☾ 5 a.		13	27	22		28	♄	10	22	♊	12	a
3	F			25	51	23		27	♅	5	54	♋	13	b
4	G	4 ſun. in Lent	♈	7	59	24		27	♂	0	57	♍	14	C
5	A	☾ Apog.		19	57	25		26	♀	6	34	♎	15	d
6	b		♉	1	49	26		26	☿	12	39	♈	16	e
7	c	♂ ♀ ☾ 1 a.		13	38	27		25	♄	10	40	♊	17	f
8	D	☐ ♂ ☾ 8 p.		25	25	28		25	♅	5	17	♋	18	g
9	E	♂ ♄ ☾ 7 p.	♊	7	16	29		24	♂	29	34	♌	19	a
10	F	✶ ☿ ☾ 10 a.		19	16	0	♈	24	♀	12	19	♉	20	b
11	G	5 ſund. in Len.	♋	1	30	1		23	☿	19	51	♈	21	C
12	a	✶ ♀ ☾ 1 p.		14	4	2		22	♄	11	0	♊	22	d
13	b	☐ ☿ ☾ 1 a.		27	3	3		22	♅	4	39	♋	23	e
14	c	✶ ♄ ☾ 1 p.	♌	10	30	4		21	♂	28	30	♌	24	f
15	D	♂ ♂ ☾ 6 p.		24	20	5		20	♀	18	1	♉	25	g
16	E	☐ ♄ ☾ 5 p.	♍	8	51	6		19	☿	24	31	♈	26	a
17	F	△ ♀ ☾ 6 a.		23	49	7		18	♄	11	23	♊	27	b
18	G	Palme ſund.	♎	8	44	8		17	♅	4	1	♋	28	C
19	A	♂ ☿ ☾ 2 p.		23	54	9		17	♂	27	45	♌	29	d
20	b	☾ Perig.	♏	8	59	10		16	♀	23	40	♉	30	e
21	c	♂ ♀ ☾ 1 p.		23	52	11		15	☿	26	9	♈	31	f
22	D	♂ ♄ ☾ 5 p.	♐	8	25	12		14	♄	11	49	♊	A	Paſſ.
23	E	△ ♂ ☾ 8 p.		22	34	13		13	♅	3	23	♋	2	a
24	F		♑	6	20	14		11	♂	27	20	♌	3	b
25	G	Laſter day.		19	53	15		10	Anun. Mary.			♉	4	C
26	A	△ ♅ ☾ at no.	♒	2	46	16		9	☿	24	57	♈	5	d
27	b	min. Reg. Car.		15	32	17		7	♄	12	18	♊	6	e
28	c	☐ ♀ ☾ 9 p.		28	5	18		6	♅	2	44	♋	7	f
29	D	☐ ♄ ☾ 3 p.	♓	10	27	19		5	♂	27	15	♌	8	g
30	E			22	40	20		4	♀	4	39	♊	9	a
31	F	☾ ☉ ☽ a.	♈	4	45	21		3	☿	21	54	♈	10	b

Aprill hath xxx. daies.

New moon the 1 day, 30 min. past 11 at noone.
First quarter the 10 day, 33 min. past 1 in the morn.
Full moon the 16 day, 10 min. past 7 at night.
Last quarter the 23 day, at 2 in the afternoon.

1	♊	1 sun. aft. East.	♈	16	43	22	♈	1	♄	12	46	♊	11	☽
2	a	☾ Prog.		28	35	23		☉	♅	2	9	♋	12	d
3	b		♉	10	6	23		58	♂	27	28	♌	13	e
4	c	□ ♂ ☾ 10 p.		22	17	24		57	♀	10	2	♊	14	f
5	d	△ ♅ ☾ 7 a.	♊	4	8	25		55	☿	17	53	♈	15	g
6	e	☌ ♀ ☾ 3 a.		16	4	26		54	♄	13	16	♊	16	a
7	f	□ ♅ ☾ 6 p.		28	8	27		52	♅	1	38	♋	17	b
8	♋	2 sun aft. East.	♋	10	25	28		50	♂	27	56	♌	18	c
9	a	✶ ♅ ☾ 5 p.		22	56	29		49	☿	15	15	♊	19	d
10	b		♌	5	53	0	♉	47	☿	15	30	♈	20	e
11	c	Terme begins.		19	13	1		45	♄	13	47	♊	21	f
12	d	☌ ♂ ☾ 3 a.	♍	3	1	2		44	♅	1	8	♋	22	g
13	e	□ ♀ ☾ 3 p.		17	17	3		42	♂	28	40	♌	23	a
14	f	☌ ♅ ☾ 10 a.	♎	1	58	4		40	☿	20	21	♊	24	b
15	♌	3 sun. aft. East.		17	05			38	☿	14	44	♈	25	c
16	a	✶ ♂ ☾ 7 a.	♍	2	8	6		36	♄	14	21	♊	26	d
17	b			17	24	7		35	♅	0	40	♋	27	e
18	c	□ ♂ ☾ 7 a.	♐	2	27	8		32	♂	29	40	♌	28	f
19	d	☌ ♄ ☾ 7 a.		17	15	9		30	☿	25	15	♊	29	g
20	e	□ ♅ ☾ 9 a.	♑	1	39	10		28	☿	16	4	♈	30	a
21	f	□ ☿ ☾ 1 p.		15	37	11		26	♄	14	56	♊		b
22	♌	4 sun. aft. East.		29	9	12		42	♅	0	18	♋	2	c
23	a	✶ ☿ ☾ 10 p.	♒	12	16	13		22	♂	0	54	♍	3	d
24	b	☌ ♂ ☾ at mi.		25	0	14		20	☿	29	57	♊	4	e
25	c	Marke Evan.	♓	7	28	15		18	☿	19	9	♈	5	f
26	d	□ ♄ ☾ 3 a.		19	42	16		17	♄	15	31	♊	6	g
27	e	☌ ♅ ☾ 8 a	♈	1	45	17		14	♅	29	59	♍	7	a
28	f	✶ ♄ ☾ 4 p.		13	41	18		11	♂	2	20	♍	8	b
29	♍	Rogat. Sund.		25	31	19		9	☿	4	25	♋	9	c
30	a	☾ Prog.	♉	7	23	20		7	☿	23	45	♈	10	d

May hath xxxi. daies.

New moon the 1 day, 53 min. past 3 after noon.
First quarter the 8 day, 44 min. past 11 at noon.
Full moon the 16 day, 42 min. past 2 in the morn.
Last quarter the 23 day, 43 min. past 2 in the morning.
New Moon the 31 day, at 7 in the morning.

1	b	Philip & Jacob	☌	19	14	21	☌	5	♄	16	8	♊	11	e
2	c	□ ♂ ☾ 5 p.	♊	1	8	22		2	♅	29	45	♍	12	f
3	d	Holy rood day.		13	0	23		0	♂	3	57	♍	13	g
4	e	□ ♅ ☾ 8 p.		25	12	23		58	♀	8	39	♋	14	a
5	f	♂ ♀ ☾ 4 p.	♋	7	26	24		55	☿	29	46	♌	15	b
6	g			19	42	25		53	♄	16	44	♊	16	c
7	a	Feme ends.	♌	2	32	26		50	♅	29	34	♍	17	d
8	b	✶ ♄ ☾ 2 p.		15	29	27		48	♂	5	40	♍	18	e
9	c	△ ☿ ☾ 11 p.		28	45	28		45	♀	12	29	♋	19	f
10	d	♂ ♂ ☾ 1 a.	♍	12	24	29		43	☿	6	37	♌	20	g
11	e	♂ ♅ ☾ 4 p.		26	27	0	♊	40	♄	17	21	♊	21	a
12	f	△ ♄ ☾ 10 p.	♎	10	52	1		38	♅	29	28	♍	22	b
13	g	Whitsunday.		25	27	2		35	♂	7	33	♍	23	c
14	a	Ex. Æg. ſ. T. F.	♍	10	39	3		33	♀	15	59	♋	24	d
15	b	✶ ♅ ☾ 5 p.		25	40	4		30	☿	14	32	♌	25	e
16	c	♂ ♄ ☾ 11 p.	♐	10	41	5		28	♄	17	58	♊	26	f
17	d	□ ♅ ☾ 6 p.		25	31	6		25	♅	29	27	♍	27	g
18	e		♑	9	42	7		22	♂	9	35	♍	28	a
19	f	♂ ♀ ☾ 2 a.		24	9	8		20	♀	18	56	♋	29	b
20	g	Trinity Sun.	♒	7	49	9		17	☿	23	28	♌	30	c
21	a	△ ♄ ☾ 7 a.		21	3	10		14	♄	18	37	♊	31	d
22	b	Trin. ſ. 6 p.	♓	3	53	11		12	♅	29	30	♍	June.	
23	c	♂ ♂ ☾ 2 a.		16	20	12		9	♂	11	44	♍	2	f
24	d	♂ ♅ ☾ 2 p.		28	31	13		6	♀	21	20	♋	3	g
25	e	Feme begins	♈	10	30	14		3	☿	3	23	♌	4	a
26	f	✶ ♄ ☾ 5 a.		22	21	15		1	♄	19	17	♊	5	b
27	g	1 ſun. aſt. Tri.	☌	4	9	15		58	♅	29	38	♍	6	c
28	a	△ ♂ ☾ 7 a.		15	58	16		55	♂	14	0	♍	7	d
29	b	△ ♅ ☾ 3 p.		27	51	17		52	♀	22	57	♋	8	e
30	c	♂ ☿ ☾ 10 p.	♉	9	51	18		49	☿	14	6	♌	9	f
31	d	♂ ♄ ☾ 7 a.		22	6	19		47	Sun Eclipſed				10	g

Iune hath xxx. daies.

First quarter the 7 day, 51 min. past 6 at night.
Full moon the 14 day, 37 min. past 10 in the morn.
Last quarter the 21 day, 9 min. past 6 at night.
New moon the 29 day, 25 min. past 8 at night.

1	e			4	19	♎	20	♊	44	♄	20	5	♊	11	a
2	f	Pha sa.		16	50		21		41	♃	29	53	♍	12	b
3	g	☉ 2 sun. aſt. Tr.		29	34		22		38	♂	16	50	♍	13	c
4	a		♌	12	30		23		35	☉	23	50	♋	14	d
5	b	✶♄☾ 2 a.		25	37		24		32	☿	27	32	♊	15	e
6	c		♍	8	53		25		30	♄	20	45	♊	16	f
7	d	♂☌☾ 4 a.		22	37		26		27	♃	0	9	♎	17	g
8	e	□☿☾ 7 a.	♎	6	29		27		24	♂	19	17	♍	18	a
9	f	△♄☾ 1 p.		20	38		28		21	☉	23	36	♋	19	b
10	g	☉ 3 sun. aſt. Tr.	♍	5	1		29		18	☿	8	17	♋	20	c
11	a	✶♂☾ 1 p.		19	38		0		15	♄	21	25	♊	21	d
12	b	✶♃☾ 5 a.	♐	4	21	♋	1		12	♃	0	30	♎	22	e
13	c	Iermeines.		19	5		2		9	♂	21	49	♍	23	f
14	d	□♃☾ 6 a.	♑	3	44		3		7	☉	22	16	♋	24	g
15	e	☌☿☾ 6 p.		18	9		4		4	☿	18	47	♋	25	a
16	f	△♃☾ 9 a.	♒	2	10		5		1	♄	22	4	♊	26	b
17	g	☉ 4 sund. aſt. Tr.		15	59		5		58	♃	0	54	♎	27	c
18	a			29	18		6		55	♂	24	25	♍	28	d
19	b		♓	12	11		7		52	☉	20	6	♋	29	e
20	c	☌♂☾ 1 p.		24	41		8		49	☿	27	27	♋	30	f
21	d		♈	6	52		9		46	♄	22	42	♊	July	g
22	e	✶♄☾ 8 p.		18	50		10		43	♃	1	23	♎	2	a
23	f			0	39		11		40	♂	27	6	♍	3	b
24	g	John Baptiſt.	♉	12	24		12		38	☉	17	9	♋	4	c
25	a	△♂☾ 8 p.		24	12		13		35	☿	5	38	♌	5	d
26	b	✶☌☾ 2 p.	♊	6	7		14		32	♄	23	20	♊	6	e
27	c	☌♄☾ 10 p.		18	12		15		29	♃	1	26	♎	7	f
28	d	□♃☾ 2 p.	♋	0	32		16		26	♂	29	52	♍	8	g
29	e	Peter Apoſt.		13	6		17		23	☉	14	0	♋	9	a
30	f	✶♂☾ 9 p.		25	57		18		20	☿	23	5	♌	10	b

July hath xxxi. daies.

First quarter the 6 day, 21 min. after midnight.
Full Moon the 13 day, 33 min. past 7 at night.
Last quarter the 20 day, 17 min. past 11 at night.
New moon the 29 day, at 8 in the morn.

1	☌	6	ſun. aſt. Tr.	☊	9	3	19	♑	18	♄	23	55	♓	11	☌	☉	☍	☽	☍	♂	☍	♃	☍
2	a	✶	♄ ☾ 3 p.		22	22	20		15	♅	2	32	♈	12									
3	b	✶	♀ ☾ 10 p.	♍	5	52	21		12	♂	2	41	♈	13									
4	c	□	♄ ☾ 8 p.		19	31	22		9	♀	11	1	♉	14									
5	d	☌	♂ ☾ 1 p.	♎	3	17	23		6	☿	9	37	♊	15									
6	e	△	♄ ☾ at mi.		17	11	24		3	♄	24	32	♈	16									
7	f			♍	1	10	25		1	♅	3	11	♈	17									
8	☉	7	ſund. aſt. Tr.		15	17	25		58	♂	5	34	♈	18									
9	a	✶	♅ ☾ 6 p.		29	30	26		55	♀	8	35	♉	19									
10	b			♐	13	47	27		52	☿	25	24	♊	20									
11	c	☍	♄ ☾ 6 a.		28	7	28		50	♄	25	7	♊	21									
12	d	□	♂ ☾ 3 a.	♑	12	22	29		47	♅	3	52	♈	22									
13	e	△	♅ ☾ at mi.		26	31	0	♊	44	♂	8	30	♈	23									
14	f	△	♂ ☾ 9 a.	♒	10	24	1		41	♀	7	4	♉	24									
15	☉	8	ſun. aſt. Tri.		24	2	2		38	☿	29	30	♊	25									
16	a			♓	7	17	3		36	♄	5	42	♊	26									
17	b	□	♄ ☾ 10 p.		20	9	4		33	♅	4	7	♈	27									
18	c	☍	♅ ☾ 4 p.	♈	2	40	5		30	♂	11	29	♈	28									
19	d		Log. da. begin		14	52	6		28	♀	6	34	♉	29									
20	e	△	☿ ☾ 11 p.		26	50	7		25	☿	2	11	♊	30									
21	f	✶	♀ ☾ 8 a.	♉	8	38	8		23	♄	26	15	♊	31									
22	☉	9	ſun. aſt. Tri.		20	22	9		20	♅	5	25	♈	August									
23	a	△	♅ ☾ 6 p.	♊	2	9	10		17	♂	14	30	♈	2									
24	b	△	♂ ☾ 2 p.		14	5	11		15	♀	7	7	♉	3									
25	c		Jan. Aſc. Eaſt.		26	14	12		12	☿	3	7	♊	4									
26	d	☌	♀ ☾ 9 a.	♋	8	39	13		10	♄	20	47	♊	5									
27	e	□	♂ ☾ 3 a		21	25	14		7	♅	6	15	♈	6									
28	f	✶	♅ ☾ 3 p.	♌	4	32	15		5	♂	17	35	♈	7									
29	☉	10	ſun. aſt. Tr.		17	59	16		2	♀	8	10	♉	8									
30	a	✶	♀ ☾ at mi.	♍	1	43	17		0	☿	1	41	♊	9									
31	☽				15	40	17		58					10									

Firſt quarter the 5 day, 36 min. paſt 5 in the morning.
Full Moone the 12 day, 12 min. paſt 6 in the morning.
Laſt quarter the 20 day, 37 min. paſt 5 in the morning.
New Moon the 27 day 27 min. paſt 4 after Noon.

1	b	☌☿☽	at mi.	♍	29	45	18	♎	55	♄	27	22	♓	11	f
2	c	☌♂☽	at mi.	♎	13	52	19		53	♃	7	16	♑	12	g
3	d	✶☿☽	1 p.		28	0	20		50	♂	21	21	♑	13	a
4	e			♏	12	4	21		48	☉	11	10	♋	14	b
5	f	11 ſun.aft.Tri.			26	6	22		46	☿	27	40	♎	15	c
6	g	△☿☽	2 p.	♐	10	5	23		44	♄	27	50	♓	16	d
7	a	☍♄☽	6 p.		24	1	25		41	♃	8	11	♑	17	e
8	b	☍♀☽	9 p.	♑	7	55	25		39	♂	24	31	♑	18	f
9	c	□☌☽	6 p.		21	45	26		37	☽	14	5	♋	19	g
10	d	△♃☽	5 p.	♒	5	29	27		35	☿	23	6	♎	20	a
11	e	☍☿☽	5 p.		19	5	28		32	♄	28	15	♓	21	b
12	f	12 ſun aft. Tr.		♓	2	21	29		30	♃	9	6	♑	22	c
13	g	△☿☽	2 p.		15	24	0	♍	28	♂	27	45	♑	23	d
14	a	□♄☽	at no.		28	10	1		26	☽	17	31	♋	24	e
15	b	☍♃☽	10 a.	♈	10	37	2		24	☿	20	25	♎	25	f
16	c	✶♄☽	11 p.		22	47	3		22	♄	28	39	♓	26	g
17	d	☍♂☽	2 a.	♉	4	44	4		20	♃	10	3	♑	27	a
18	e	□☿☽	7 p.		16	32	5		18	♂	1	1	♍	28	b
19	f	13 ſun.aft.Tr.			28	16	6		16	☽	21	20	♋	29	c
20	g	△♃☽	2 p.	♊	10	2	7		14	☿	20	29	♎	30	d
21	a	✶☿☽	9 a.		21	57	8		12	♄	29	0	♓	31	e
22	b	☌♄☽	1 a.	♋	4	6	9		11	♃	11	2	♑	Sept.	
23	c	□♃☽	1 a.		16	33	10		9	♂	4	18	♍	2	g
24	d	Bartholi. Aqu.			19	59	11		7	☽	25	30	♋	3	a
25	e			♌	12	39	12		5	☿	24	14	♎	4	b
26	f	14 ſun.aft. Tr.			26	20	13		4	♄	29	19	♓	5	c
27	g	✶☌☽	5 a.	♍	10	23	14		2	♃	12	2	♑	6	d
28	a	✶☿☽	7 p.		24	44	15		0	♂	7	38	♍	7	e
29	b	Dog da. en.		♎	9	15	15		59	☽	29	58	♋	8	f
30	c	△♄☽	9 p. Fa.		23	49	16		57	☿	0	42	♍	9	g
31	d	☌♂☽	2 p.	♍	8	20	17		56					10	a

First quarter the 2 day, 38 min. past 11 at night.
Full moon the 10 day, 53 min. past 6 at night.
Last quarter the 18 day, 45 min. past 11 at night.
New moon the 26 day, 55 min. past 3 in the morn.

1	f		♍	22	43	18	♍	54	♄	29	39	♓	11	♄
2	☾	15 sun. aft. Tr.	♐	6	55	19		53	♅	13	16	♑	12	☾
3	a			20	54	20		51	♂	11	40	♍	13	♉
4	b	△ ☿ ☾ 8 p.	♎	4	43	21		50	♀	5	38	♎	14	♐
5	c	□ ♅ ☾ 3 a.		18	20	22		48	☿	12	46	♍	15	♑
6	d	☌ ♀ ☾ 11 p.	♒	1	48	23		47	♄	29	56	♓	16	♏
7	e	△ ♅ ☾ 10 a.		15	7	24		46	♅	14	19	♑	17	♈
8	f	△ ♄ ☾ 3 p.		28	15	25		44	♂	15	6	♍	18	♉
9	☾	16 sun. aft. Tr.	♓	11	13	26		43	♀	10	35	♎	19	☾
10	a	□ ♄ ☾ 11 p.		23	58	27		42	☿	20	21	♍	20	♉
11	b		♈	6	30	28		40	♄	0	11	♏	21	♐
12	c	☌ ♅ ☾ 5 a.		18	47	29		40	♅	15	22	♑	22	♑
13	d	✶ ♄ ☾ 10 a.	♉	0	53	0	♑	39	♂	18	35	♍	23	♏
14	e	□ ☿ ☾ 6 p.		12	41	1		38	♀	15	42	♎	24	♈
15	f	☌ ♂ ☾ 1 a.		24	35	2		37	☿	29	20	♍	25	♉
16	☾	17 sun. aft. Tr.	♊	6	20	3		36	♄	0	23	♏	26	☾
17	a	✶ ♀ ☾ 1 p.		18	7	4		35	♅	16	27	♑	27	♉
18	b	☌ ♄ ☾ at no.	♋	0	2	5		34	♂	22	6	♍	28	♐
19	c	☌ ☉ ☿ 4 p.		12	9	6		33	♀	20	58	♎	29	♑
20	d	△ ♂ ☾ 9 a.		24	36	7		32	☿	8	10	♑	30	♏
21	e	Mah. Apoſt.	♌	7	25	8		31	♄	0	32	♏		Octob.
22	f	☌ ♀ ☾ 6 p.		20	40	9		30	♅	17	31	♑	2	♄
23	☾	18 sun. aft. Tr.	♍	4	24	10		30	♂	25	39	♍	3	☾
24	a	□ ☿ ☽ 1 p.		18	34	11		29	♀	26	20	♎	4	♉
25	b	□ ♄ ☾ 7 a.	♎	3	7	12		28	☿	16	50	♑	5	♐
26	c	☌ ♅ ☾ at no.		17	55	13		28	♄	0	39	♏	6	♑
27	d	✶ ♀ ☾ 6 a.	♍	2	52	14		27	♅	18	36	♑	7	♏
28	e			17	47	15		26	♂	29	13	♍	8	♈
29	f	Michael Apoſt.	♐	2	33	16		26	♀	1	49	♍	9	♉
30	☾	19 sun aft. Tr.		17	5	17		25	☿	5	8	♑	10	☾

First quarter the 2 day, 44 min. past 7 at night.
Full moon the 9 day, 52 min. past 11 at night.
Last quarter the 18 day, 22 min. past 4 afternoon.
New moon the 25 day, 48 min. past 1 after noon.

1	a	△ ♀ ☾ 5 p.	♍	1	19	18	♎	25	♄	0	41	♋	11	d
2	b	□ ♃ ☾ 7 p.		15	13	19		25	♃	19	41	♎	12	e
3	c	✶ ♂ ☾ 7 p.		28	49	20		24	♂	2	49	♐	13	f
4	d		♒	12	6	21		24	☿	7	24	♍	14	g
5	e	△ ♄ ☾ 10 p.		25	9	22		24	☌	3	6	♏	15	a
6	f	☌ ♀ ☾ 3 p.	♓	7	58	23		23	♄	0	41	♋	16	b
7	g	20 sun. aft. Tr.		20	35	24		23	♃	20	46	♎	17	c
8	a	△ ♂ ☾ 7 p.	♈	3	1	25		23	♂	6	28	♐	18	d
9	b	☌ ♃ ☾ 11 p.		15	17	26		23	☿	13	1	♍	19	e
10	c	✶ ♄ ☾ 6 p.		27	22	27		23	☉	10	54	♏	20	f
11	d	☌ ☿ ☾ 5 p.	♉	9	20	28		22	♀	0	37	♋	21	g
12	e	△ ♀ ☾ 1 a.		21	12	29		21	♃	21	51	♎	22	a
13	f		♊	3	0	30	♏	22	♃	10	8	♐	23	b
14	g	21 sun. aft. Tr.		14	47	31		23	☿	18	45	♍	24	c
15	a	☌ ♄ ☾ 7 p.		26	37	2		23	☉	18	23	♏	25	d
16	b		♋	8	34	3		23	♄	0	31	♋	26	e
17	c	□ ♃ ☾ 4 p.		20	43	4		23	♃	22	56	♎	27	f
18	d	Luke. Vang.	♌	3	8	5		23	♂	13	49	♐	28	g
19	e	△ ☌ ☾ 9 a.		15	53	6		23	☿	24	37	♍	29	a
20	f	✶ ♄ ☾ 2 p.		29	37	7		23	☉	25	49	♏	30	b
21	g	22 sun. aft. Tr.	♍	12	40	8		24	♄	0	23	♋	31	c
22	a	☌ ♀ ☾ 1 p.		26	45	9		24	♃	24	0	♎	Nouē	
23	b	Crime negeth	♎	11	15	10		24	♃	17	30	♐	2	c
24	c	☌ ♃ ☾ 9 a.		26	7	11		25	☿	0	31	♎	3	d
25	d	Sun Eclipsed.	♏	11	12	12		25	☉	3	5	♐	4	e
26	e	✶ ♀ ☾ 11 p.		26	21	13		25	♄	0	11	♋	5	f
27	f	☌ ☿ ☾ 2 a.	♐	11	26	14		26	♃	25	4	♎	6	g
28	g	Simon & Jude		26	20	15		26	♂	21	15	♐	7	a
29	a	□ ♀ ☾ 3 a.	♑	10	51	16		27	☿	6	26	♎	8	b
30	b	□ ♃ ☾ 1 p.		20	0	17		27	☉	10	29	♐	9	c
31	c	✶ ☿ ☾ 3 p.	♒	8	45	18		28					10	d

November hath xxx. daies.

First Quarter the 1 day, 43 min. past 6 in the morning.
Full Moon the 9 day. 38 min. past 6 in the morning.
Last Quarter the 17 day, 49 min. past 6 in the morn.
New Moon the 23 day at midnight.
First quarter the 30 day, 33 min. past 8 at night.

1	d	All Saints.	♒	22	4	19	♏	28	♄	29	53	♊	11	g
2	e		♓	5	3	20		29	♃	26	21	♋	12	a
3	f	△ ♄ ☾ 2 a.		17	41	21		30	♂	25	46	♌	13	b
4	g	□ ☿ ☾ 3 a.		29	55	22		30	♀	13	36	♋	14	c
5	a	24 sun. att. Tr.	♈	12	17	23		31	☿	15	52	♌	15	d
6	b	Powder Trea		24	17	24		32	♄	29	37	♊	16	e
7	c	☌ ♃ ☾ 5 p	♉	6	16	25		33	♃	27	23	♋	17	f
8	d	The Moon to-		18	6	26		33	♂	29	34	♌	18	g
9	e	tally eclipsed,		29	55	27		35	☿	19	38	♋	19	a
10	f	to be seen in	♊	11	44	28		35	☿	19	53	♌	20	b
11	g	England.		23	36	29		36	♄	29	18	♊	21	c
12	a	25 sun. aft. Tr.	♋	5	34	0	♐	37	♃	28	24	♋	22	d
13	b	☌ ♂ ☾ 5 a.		17	38	1		38	♂	3	24	♍	23	e
14	c			29	53	2		39	♀	25	40	♋	24	f
15	d	□ ♃ ☾ 9 a.	♌	12	22	3		40	☿	21	20	♌	25	g
16	e	△ ☿ ☾ 9 p.		25	6	4		41	♄	28	56	♊	26	a
17	f	✶ ♃ ☾ 7 p.	♍	8	11	5		42	♃	29	23	♋	27	b
18	g	☌ ♂ ♀ 1 p.		21	38	6		43	♂	7	14	♍	28	c
19	a	26 sun. aft. Tr.	♎	5	30	7		44	♀	1	45	♏	29	d
20	b	□ ♂ ☾ 4 p.		19	47	8		45	☿	18	17	♌	30	e
21	c	△ ♄ ☾ 4 a.	♏	4	26	9		46	♄	28	34	♊	Dece.	
22	d	☾ ☍ ♀ 11.		19	23	10		47	♃	0	21	♏	2	g
23	e		♐	4	31	11		48	♂	11	5	♍	3	a
24	f	☌ ☿ ☾ 3 a.		19	40	12		49	♀	7	50	♏	4	b
25	g	27 sun. att. Tr.	♑	4	24	13		50	☿	12	4	♌	5	c
26	a	☌ ♂ ☾ 1 a.		19	28	14		51	♄	28	10	♊	6	d
27	b	✶ ☿ ☾ 7 p.	♒	3	51	15		52	♃	1	17	♏	7	e
28	c	Term end Fa		17	48	16		54	♂	14	58	♍	8	f
29	d	□ ☿ ☾ 9 p.	♓	1	16	17		55	♀	13	58	♏	9	g
30	e	Andrew Apo.		14	18	18		56	☿	5	59	♌	10	a

Full Moon the 9 day, 11 min. past 2 in the morn.
Last Quarter the 16 day, 55 min. past 6 at night.
New Moon the 23 day, at 11 in the forenoon.
First Quarter the 30 day, 42 min. past 3 in the morn.

1	f	☐ ♄ ☾ 1 p.	♓	26	56	19	♐	57	♄	27	45	♊	11	b
2	g	Advent Sund.	♈	9	15	20		59	♅	2	11	♍	12	
3	a	✶ ♅ ☾ at mi.		21	19	22		0	♂	18	53	♎	13	d
4	b	♌ ♅ ☾ 10 a.	♉	3	14	23		1	♀	20	7	♍	14	e
5	c	△ ♂ ☾ 11 p.		15	3	24		2	☿	4	47	♐	15	f
6	d	♌ ♀ ☾ 2 a.		26	50	25		4	♄	27	19	♊	16	g
7	e	♌ ☿ ☾ 5 a.	♊	8	38	26		5	♅	3	3	♍	17	a
8	f	☍ ☉ ♄ 3 p.		20	31	27		6	♂	22	48	♎	18	b
9	g	1 ſun aſt. Adv.	♋	2	32	28		8	♀	26	17	♍	19	
10	a			14	41	29		9	☿	7	18	♐	20	d
11	b	△ ♀ ☾ 3 p.		26	59	0	♎	10	♄	26	53	♊	21	e
12	c	△ ☿ ☾ 10 a.	♌	9	29	1		11	♅	3	52	♍	22	f
13	d	✶ ♄ ☾ 8 p.		22	9	2		13	♂	26	43	♎	23	g
14	e	☐ ☿ ☾ 11 p.	♍	5	23			14	♀	2	29	♐	24	a
15	f	☌ ☉ ♃ 3 p.		18	9	4		15	☿	12	3	♐	25	b
16	g	2 ſun. aſt. Ad.	♎	1	32	5		16	♄	26	28	♊	26	
17	a	✶ ☿ ☾ 10 a.		15	12	6		18	♅	4	39	♍	27	d
18	b	♂ ♅ ☾ 9 p.		29	12	7		20	♂	0	38	♒	28	e
19	c		♍	13	32	8		21	♀	8	41	♐	29	f
20	d	✶ ♂ ☾ 6 p.		28	9	9		22	☿	18	1	♐	30	g
21	e	Thomas Apo.	♐	12	59	10		23	♄	26	4	♊	31	a
22	f	✶ ♅ ☾ 11 p.		27	55	11		25	♅	5	23	♍		
23	g	3 ſun. aft. Adv.	♏	22	50	12		26		4	33	♒	2	
24	a	☌ ♄ ☿ 3 p.		17	35	13		27	♂	14	54	♐	3	d
25	b	Chriſtm. day	♒	22	2	14		29	♀	24	46	♐	4	e
26	c	St. Stephen.		6	4	15		30	☿	25	17	♊	5	f
27	d	Joan Evan.	♓	9	39	16		31	♄	6	50	♍	6	g
28	e	Innocents.		22	47	17		33	♅	8	31	♒	7	a
29	f	✶ ♂ ☾ 8 p.	♈	5	28	18		34	♂	21	9	♐	8	b
30	g	△ ♀ ☾ 10 p.		17	48	19		35	♀	1	54	♏	9	
31	a			29	51	20		36	☿				10	d

ASTRONOMICAL CALCULATIONS:

For the Yeare of our Lord God, 1649, Being the first after *Bissextile*, or *Leap-Yeare*.

Conteining a briefe description of the precedent Diary, with the use thereof.

Also the *Orientall* and *Occidentall* rising and setting of the five Planets before and after the Sun: With a description of the Eclipses both Solar and Lunar, the causes thereof, how and when they happen, with exemplary figures to demonstrate the same.

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Whereunto is added a CHRONOGRAPHY of the foure Quarters of the Yeare: A Table of the Tides, the Rising and Declination of the Sun, with diverse uses thereof.

By WILLIAM LEYBOURNE, Practitioner in the Mathematicks.

LONDON,
Printed by *R. L.* for the Company of Stationers, MDCXLIX.

THE Face of the Yeare unmasked,

OR, The ſeverall Columnes in each *Moneth explained.*

THe yeare conſiſting of twelve Moneths, is conteined in 12 pages, each page is divided into 8 Columnes.

In the firſt of which is placed the dayes of the Moneth.

The ſecond ſheweth the daies of the Weeke, G being the Dominicall Letter.

The third conteineth the fixed and moveable Feaſts yet in uſe, the beginning and ending of the Termes of Law, the *Apogæon* and *Perigæon* of the Moone, with the daily aſpects of the Planets with the Moone, as alſo with themſelves.

The fourth ſheweth the place of the Moone, in Signes, Degrees, and Minutes.

The fifth ſheweth the true place of the Sun, in Signes, Degrees, and Minutes.

The ſixth ſheweth the place of the Planets every fifth day at noone, by which you may know the true place of any of them for any of the other intermediate dayes, by taking the difference betwixt the two daies before and after, and ſo worke by the Rule of Proportion.

Example. I deſire to know the true place of *Saturn* on the 3 day of *January*. I find *Saturn* on the firſt day to be in 10d 10′ of ♊, and on the 6 day of *January* I find him

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in 9^d. $59'$, of ♊, the difference is $11'$, wherefore, to finde his true place on the third day *January*, I say, by the Rule of Proportion: If foure dayes motion, give $11'$, what shall two dayes motion give? multiply and divide, and you shall finde $5'$, and $30''$, to be substracted from 10^d. $10'$, of ♊, because ♄ is retrograde, and the remainder is 10^d. $4'$, $30''$, the true place of ♄ on the third of *January*: but because we have no occasion to come to so smal parts as seconds, we will therefore neglect the 30 seconds, and so allow ♄ to be in the 10^d. and $4'$ of ♊, the like is to be done for any day, and with any of the other Planets, but for better information, see their following worke.

Jan. 1 ♄ 10^d. $10'$, ♊
Jan. 6 ♄ 9^d. $59'$, ♊
Differ in 4 daies is $11'$.

If 4 daies give $11'$ what 2 da.

4 11 2
2
4) 22 (5
20
2

The two last Columnes shew the day of the Moneth and day of the Weeke, according to the *Gregorian accompt*.

The Orientall and Occidentall rising and setting of the 5 Planets before or after the Sunne: this Yeare, 1649.

SAturne, **Is Occidentall till the last of May, and from thence Orientall to the Yeares end.**

Jupiter, **Is Orientall till the 13 of March, and from thence Occidentall till the second of October, and then he is Orientall and setteth after the Sun, the remainder of the yeare.**

Mars

Mars, Is Oriental til the 13 of February, and all the reſt of the yeare he is Occidentall.

Venus, This bright Planet is Occidentall, or our evening Starre, till the 25 of June; for then ſhe begins to be Orientall, or our bright morning Starre, continuing ſo the remainder of the yeare.

Mercury, Is Oriental till the 14 of February, from thence Occidentall till the 29 of March; and then he is againe Oriental, till the 1 of June, and from thence Occidentall, till the 7 of Auguſt, where he begins againe to be Oriental, and ſo continues till the 18 of September: and is then againe Occidentall, till the 23 of November; after which time he is Oriental, and riſeth before the Sunne, the remainder of the yeare.

You are to underſtand, that all the time that a Planet is Occidentall, it may be ſeene after Sunne ſet, becauſe the Planet ſetteth after the Sunne; and all the while they are Orientall, they may be ſeene before Sun riſe; becauſe the Planets riſe before the Sunne: By the Orientall and Occidentall riſing and ſetting of the Planets, together with their Aſpects with the Moone, they may very eaſily be knowne from the other fixed Starres, who continually keepe their Stations, and alter not ſenſibly in many yeares,

A briefe Deſcription of the foure Seaſons, or Quarters of the Yeare.

ASTronomers do divide the Year into 4 Quarters, or Seaſons, *viz. Vernall, Eſtivall, Autumnall, Hyemnall*, each of theſe taking beginning, when glorious *Phœbus* in his Annuall courſe, toucheth any of the Cardinall Cœleſtiall Signes, which are, ♈, ♋, ♎, ♑: thereby making the longeſt day and ſhorteſt night, the ſhorteſt day and longeſt night: and day and night of equall length.

Of the Spring.

THis Vernall Quarter taketh beginning at that instant of time, in which the Sunne entreth into the first minute of the Vernall Æquinoctiall signe ♈, making the day and night of equall length through the whole World, which is this yeare at London on Saturday, the 10 of March, 21 minutes past 2 in the morning; and continueth till he hath made his naturall motion through the three Northerne, Vernall, signes, ♈ ♉ ♊.

Of the Summer.

ÆStas beginneth, at the Suns entrance into the Northern Tropicall signe ♋, making with us (and all those that have North Latitude) the longest day and the shortest night, and to those that have South Latitude, the shortest day and longest night, which is this yeare on Munday the 11 of June, 37 min: past 5 in the morning, and continueth till by his naturall motion, he hath passed through the three Northern Æstivall signes ♋ ♌ ♍.

Of Autumne, or Harvest.

THis Autumnall Season beginneth at the Suns entrance into the first minute of the Autumnall Æquinoctiall signe ♎, making again the day and night of equall length, which happeneth on Wednesday the 12 of September 16 min: past 8 at night, and continueth till by his dayly declination, he hath moved through the three Southern Autumnall signes ♎ ♏ ♐.

Of

Of Winter.

WInter (which hath beene usually placed as the first Quarter of the yeare) taketh beginning at the Suns ingresse into the Southerne Tropicall signe ♑, making the shortest day and longest night to the Northern, and longest day and shortest night to the Southerne Inhabitants, which is this yeare on Tuesday the 11 of December 57 minutes past 7 in the morning, and continueth till he hath passed through the three Hyemnall signes: ♑ ♒ ♓.

Of the Eclipses of the Sun and Moone; *the cause thereof, how and when they happen.*

COncerning the Eclipse of the Moone I said somewhat the last yeare, which words I shall now make plaine by the ensuing Figures, the words which I then repeated are here againe recited, *viz.* An Eclipse of the Moone is but the interposition of the earth betweene the body of the Sun and Moon, being diametrically opposite, as if a line drawn from the center of the Sun to the center of Moon should pass directly through the center of the earth, which onely happeneth at the opposition, or full Moon, when the Sun and Moon happens to be either in or neere the head or taile of the Dragon, which is onely the intersection of two Circles, the *Ecliptick*, and *Deferent*, which is the Circle which carrieth the Moone about, and you are likewise to note that an Eclipse of the Moon appeareth to all those above whose Horizon the Moon is at the time of the opposition, though it be otherwise with an Eclipse of the Sun, for an Eclipse of the Sun is to some total, to others partiall, and to others not at all visible, though the Sun be at the time of Conjunction above all their Horizons.

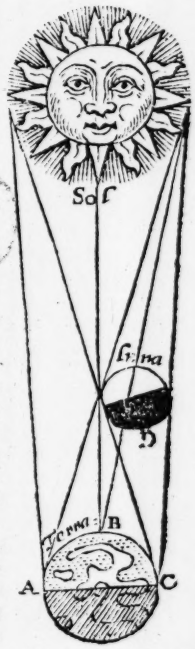
A figure of the Moones ECLIPSE.

THis figure of the Moones Eclipse, plainely demonstrateth how the Eclipse may be either totall, partiall, or not at all, by the placing of the three little Cirëles about the shadow of Earth. and the reason thereof is for that the body of the Sunne being much bigger then the Globe of the earth forceth the Earths shaddow to be conicall, meeting in a point, and so the variation of the Moones Latitude may cause her body at the time of conjunction to be without the limits of the Earths shaddow. Also observe, that the the further the Sun is distant from the Earth, (as when he is at his greatest distance) the farther is the conicall shadow extended, and then is the Moone most subiect to suffer an Eclipse, and the neerer the Sun is to the Earth, the shorter is the extent of the shadow. This exemplary figure is a better demonstration in these perticulars, then many words.

Of

Of the Eclipse of the *Sun*.

AN Eclipse of the Sun is the interposition of the Moon (it being an opacous body) between our sight and the ☉, which is only at the time of the Conjunction, or full Moon, when they meet, as before, in or about the head or taile of the Dragon, now the Moone being but a small body in respect of the Sun, and much lesse then the Earth, it cannot hide the sight of the Sun from all the inhabitants at once, but it may obscure it from some totally, and from others but in part; as by this Figure may appeare. By this type you may perceive that the Sun shineth upon all the Horizon from *A* to *C*, were it not for the interposed body of the Moone at *D*, but in respect of the Moones situation in that place, the inhabitants at *C* are wholly deprived of the sight of the Sun, and therefore to them it is a totall Eclipse, but to those that dwell at *B* onely halfe the Sun is hidden from their sight, and also these that dwell at *A* behold all the Sunne perfectly, as if there were no Eclipse at all.



Of

Of the *Eclipses* which will happen this Yeare.

THere will be five Eclipses of the Luminaries this Yeare, three of the Sun, and two of the Moone, foure whereof will be visible in our Horizon

The first is a totall one of the Moon, and happeneth on the 16 of May, 24′, past 2 in the Morning.

A Type of the Moones Eclipse.

		H	m	
The beginning	is at	0	35	in the morn.
beginning of totall darknesse		1	46	
middle of the Eclipse		2	24	
end of the totall darknesse		3	22	
time of the totall darknesse		1	36	
end of the Eclipse		4	34	

The second is a small Eclipse of the Sunne on the last of May, 43 minutes past 5 in the morning, the Suns altitude being about 15 degrees, and his Azimuth about 18 degrees from the East Northward, that is, between the points E N E, and E by N.

		H	m	
The beginning	is at	5	16	in the morning.
middle		5	43	
end		6	12	

The quantity Eclipsed is three quarters of a digit: the totall duration is 56′.

The

The third Eclipse is of the Sun, and happeneth on the 25 of October, the Sun being S S W.

A Type of the Eclipse of the Sunne.

		H	m	
The	beginning	1	10	in the afternoone.
	middle	2	10	
	end	3	10	
	duration	2	00	

The Digits Eclipsed are 5, and one sixth part.

The fourth is a totall Eclipse of the Moone on the of November.

		H	m	
The	beginning	4	37	in the morn
	beginning of totall darkneſſe	5	54	
	middle of the Eclipse	6	47	
	end of the totall darkneſſe	7	41	
	time of the totall darkneſſe	1	46	
	end of the Eclipse	8	54	

The last Eclipse is of the Sun, and happeneth on the 23 of November neere midnight, and may be seen by our Antipodes nigh their Meridian; the digits Eclipsed will be about 3. The calculation of the two

Solar

Solar Eclipses in May and November, I received of my worthy Friend M. Vincent Wing, May 15. 648. in whose Ama nack, entituled Specvlum Vranicum, you may see the exact calculation of the first rectified for the Meridian of Stamford, in Lincolnshire, to which I referre you.

The use of the Table of the Suns rising.

THis Table consisting of 13 Columnes needeth no explanation, for having found the Moneth in the head of the Table, and the day of the Moneth in the first Columne towards the left hand, under the Title, *Dayes*, in the intersection of these two Lines you shall have the houre and minutes of the Suns rising at *London*.

Example.

I desire to know the time of the Suns rising on the first of *January* this Yeare, I finde *January* in the head of the Table, and against the first day I finde 8 0 which is 8 of the clock and 0 minutes, at which time the Sun riseth at *London* on the first of *January*.

To finde the time of the Suns set, and the length of the Day and Night.

DOuble the houres and minutes of the Suns rising, and the summe thereof is the length of the night, and if you substract the houres and minutes of Sun rising from 12 houres, the remainder is the houre of Sun set, and if you double the houres and minutes of Sun set, the summe thereof is the length of the day.

Example.

January the first, the Sun riseth at 8 of the clocke, this doubled, giveth 16 houres for the length of the night, and being substracted from 12 houres, leaveth 4 houres, the time of Sun set: and this number doubled, giveth 8 houres for the length of the day.

A Table of the Sunsrising

January		February		March		Aprill		May		June		July		August		Septemb		October		Novem		Decemb	
8	00	8	48	7	43	6	44	5	37	4	10	4	02	5	2[illegible]	5	22	7	23	8	25	7	50
8	01	8	50	7	45	6	46	5	39	4	11	4	02	5	18	5	20	7	21	8	24	7	49
8	02	8	52	7	47	6	48	5	40	4	11	4	01	5	16	5	18	7	19	8	23	7	49
8	03	8	54	7	49	6	50	5	42	4	11	4	00	5	15	5	16	7	18	8	21	7	49
8	05	8	56	7	51	6	52	5	43	4	11	5	59	5	13	5	14	7	16	8	19	7	48
8	06	8	57	7	53	6	54	5	44	4	11	5	58	5	12	5	12	7	14	8	18	7	48
8	07	8	59	7	55	6	56	5	46	4	12	5	57	5	11	5	10	7	12	8	16	7	48
8	08	7	01	7	57	6	57	5	48	4	12	5	55	5	9	5	8	7	10	8	15	7	48
8	10	7	03	7	59	6	59	5	49	4	12	5	54	5	7	5	6	7	8	8	13	7	48
8	11	7	05	8	00	5	01	5	50	4	12	5	53	5	5	5	4	7	6	8	12	7	48
8	12	7	07	8	02	5	03	5	51	4	12	5	51	5	3	5	3	7	4	8	11	7	48
8	14	7	09	8	04	5	05	5	52	4	12	5	50	5	1	5	1	7	2	8	9	7	48
8	16	7	11	8	06	5	07	5	54	4	12	5	49	5	59	5	0	7	0	8	7	7	48
8	18	7	13	8	08	5	09	5	55	4	12	5	48	5	57	7	58	8	58	8	6	7	48
8	19	7	15	8	10	5	10	5	56	4	12	5	46	5	55	7	56	8	56	8	5	7	48
8	20	7	17	8	12	5	12	5	58	4	12	5	44	5	53	7	54	8	54	8	4	7	48
8	22	7	19	8	15	5	14	5	59	4	11	5	43	5	51	7	52	8	52	8	2	7	49
8	23	7	21	8	17	5	16	6	00	4	11	5	42	5	50	7	50	8	50	8	1	7	49
8	25	7	23	8	19	5	18	6	01	4	11	5	40	5	48	7	48	8	49	8	0	7	49
8	27	7	25	8	21	5	20	6	02	4	10	5	35	6	46	7	45	8	47	7	59	7	50
8	28	7	27	8	23	5	21	6	03	4	09	5	38	6	41	7	43	8	45	7	58	7	51
8	30	7	29	8	25	5	22	6	04	4	09	5	36	6	42	7	41	8	43	7	57	7	51
8	32	7	31	8	27	5	24	6	05	4	09	5	35	6	40	7	39	8	41	7	56	7	52
8	33	7	33	8	29	5	26	6	06	4	08	5	33	6	38	7	37	8	39	7	55	7	52
8	35	7	35	8	30	5	28	6	06	4	08	5	32	6	36	7	35	8	37	7	54	7	52
8	37	7	37	8	32	5	30	6	07	4	07	5	30	6	34	7	33	8	36	7	53	7	53
8	39	7	39	8	34	5	31	6	08	4	07	5	29	6	32	7	31	8	34	7	52	7	54
8	41	7	41	8	36	5	32	6	08	4	06	5	28	6	30	7	29	8	32	7	51	7	55
8	43			8	37	5	34	6	09	4	05	5	27	6	28	7	27	8	30	7	51	7	56
8	45			8	39	5	36	6	09	4	04	5	25	6	26	7	25	8	29	7	50	7	57
8	47			8	42			6	10			5	23	6	24			8	27			7	58

The names of certain Havens in and about *ENGLAND*.

Queenbozough, Southampton, Pozt∫mouth Ille of Wight. Spits, Kentiſh Knock. 1

Rocheſter, Maldon, Aberden, Redband, Weſt end of the Molwze. 2

Gzavez∫end, Downs, Rumney, Tenet, Silly-halfe tide, Blackneſſe. 3

Dundee St. Andzews, Liſbone, St. Lucas, Bell Ille, Holy-Ille. 4

London, Tinmouth, Hartlepwl, White-bay, Amſterdam. Wzittain, Ealizia. 5

Barwick, Flambozough head, Wzdlington Bay, Burdeaux. 6

Scarbozough Quarter tide, Lawzenas, Sebern, Rozk-haven, Dungarum, 7

New-caſtle, Humber, Falmouth, Sally, Dartmouth, Tozbay, St. Mallows. 8

Plimmouth, Weymouth, Hull, Lyn, Davids head, Antwerp. 9

Wziſtoll, Foulneſſe, at the Start. 10

Milford, Wzidgewater, Land∫-end, Water-ford, Abermozick. 11

Poztland, Peterpozt, Harflew, the Hague, St. Magnes ſound, Dublin, Lambay. 12

Pool, St. Hellen, Catnes, Ozkney, Faire-Ilſes, Kildicn. 13

Needles, Layſto, Nozth and South foze lands. 14

Yarmouth, Dober, Harwick, St. John, de Luce, Calice Roade. 15

Rye, Winchelſey, Gozend, Thames, Rhodes. 16

A Table shewing the time of high water in Houres and Minutes.

The moons age.	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16	
	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M
1	16	12	48	1	33	2	18	3	3	3	48	4	33	5	18	6	3	6	48	7	33	8	18	9	3	9	48	10	33	11	18	12	3
2	17	13	36	2	21	3	6	3	51	4	36	5	21	6	6	6	51	7	36	8	21	9	6	9	51	10	36	11	21	12	6	12	51
3	18	2	24	3	9	3	54	4	39	5	24	6	9	6	54	7	39	8	24	9	9	9	54	10	39	11	24	12	9	12	54	1	39
4	19	3	12	3	57	4	42	5	27	6	12	6	57	7	42	8	27	9	12	9	57	10	42	11	27	12	12	12	57	1	42	2	27
5	20	4	00	4	45	5	30	6	15	7	00	7	45	8	30	9	15	10	00	10	45	11	30	12	15	1	00	1	45	2	30	3	15
6	21	4	48	5	33	6	18	7	3	7	48	8	33	9	18	10	3	10	48	11	33	12	18	1	53	1	48	2	33	3	18	4	3
7	22	5	36	6	21	7	6	7	51	8	36	9	21	10	6	10	51	11	36	12	21	1	6	1	51	2	36	3	21	4	6	4	51
8	23	6	24	7	9	7	54	8	39	9	24	10	9	10	54	11	39	12	24	1	9	1	54	2	39	3	24	4	9	4	54	5	39
9	24	7	12	7	57	8	42	9	27	10	12	10	57	11	42	12	27	1	12	1	57	2	42	3	27	4	12	4	57	5	42	6	27
10	25	8	00	8	45	9	30	10	15	11	00	11	45	12	30	1	15	2	00	2	45	3	30	4	15	5	00	5	45	6	30	7	15
11	26	8	48	9	33	10	18	11	3	11	48	12	33	1	18	2	3	2	48	3	33	4	18	5	3	5	48	6	33	7	18	8	3
12	27	9	36	10	21	11	6	11	51	12	36	1	21	2	6	2	51	3	36	4	21	5	6	5	51	6	36	7	21	8	6	8	51
13	28	10	24	11	9	11	54	12	39	1	24	2	9	2	54	3	39	4	24	5	9	5	54	6	39	7	24	8	9	8	54	9	39
14	29	11	12	11	57	12	42	1	27	2	12	2	57	3	42	4	27	5	12	5	57	6	42	7	27	8	12	8	57	9	42	10	27
15	30	12	00	12	45	1	30	2	15	3	00	3	45	4	30	5	15	6	00	6	45	7	30	8	15	9	00	9	45	10	30	11	15

The use of the two fore-going Tables generally shewing the Tides at any time.

THe first of these Tables only sheweth the names of certain Ports or Havens in and about *England*, with the number of the point of the Compasse making full Sea, or high water in any of them: The other Table sheweth the time of high water in houres and minutes, at any of the places found in the former Table. Their use is thus.

Seeke the place where you would know the time of high water in the first of these Tables, and observe what figure standeth at the end of that line, where you finde the place you look for: then seek the age of the Moon, (which you may find in the third page of the book) which two numbers being known, repair to the other Table, and finde the age of the Moon in the first or second columne thereof, under the Title of *The Moons age* and the other number among the great figures in the head of the Table, and in the common angle or meeting of these two lines, you shall have the time of high water in houres and minutes.

Example. I would know the time of high water at *London* Bridge on the ninth day of *January* this yeare, 1649: I find the Moon on that day to be six daies old, and the figure standing against *London* in the first of these Tables, is 5. Now finding 6, the Moons age, in the first columne of this Table, and 5, the number standing against *London*, in the head thereof, I guide my eye downe from 5 in the head of the Table, till I come against 6, the Moons age, and there I find, 7 48, which is 7 houres & 48 minutes, or 7 of the clock, & 48 minutes past, at which time it will be high water at *London* on the 9 of *January* this yeare. In like manner, the same day at *Gravesend* it will be found to be high water 18 minutes after 6 of the clock. And in this manner you may finde the time of high water in any of the places mentioned in the first Table.

Some Uſes of the Table of the Suns Declination.

PROP. I.

The Latitude of a place, and the declination of the Sun, being given, to finde the Meridian altitude of the Sun above the Horizon, any day in the Yeare.

I deſire to know the Suns Meridian altitude on the 6 of *May*, 1649, in the Latitude of 51 l. 30′. *North* on which day at noon, the Suns Declination is 19d. 18′. *North*: Now becauſe the Latitude of the place, and the Declination of the Sun are alike ſcituate, (*viz.* on the North ſide of the *Æquinoctiall*,) I adde the Suns Declination to the complement of the Latitude, and the ſumme thereof is the Meridian altitude of the Sun above the Horizon.

Example,	d	′
May 6 1649, the Suns Declination is	19	18
The complement of the Latitude	38	30
The Meridian altitude	57	48

PROP. II.

The Suns Declination, and Meridian altitude being given, to finde the Latitude.

If the Latitude and Declination be alike, (*viz.* both North, or both South) ſubſtract the Declination from the Meridian altitude, and the remainder is the complement of the Latitude.

Example.	d	′
May 6 1649, the Meridian altitude	57	48
May 6 1649, the Suns Declination	19	18
The complement of the Latitude	38	30

But here is to be noted, in the firſt Example, that if the Latitude and Declination be unlike, the one North, and the other South, you muſt then ſubſtract the Declination from the complement of the Latitude, and the remainder is the Meridian altitude. And in the ſecond Example, if the Latitude and Declination be unlike, you

must adde the Meridian altitude and Declination together, and the ſumme of them is the complement of the Latitude. Note, that the complement of the Latitude, is ſo much as the Latitude wanteth of 90 degrees. So $38^d. 30'.$ the complement of the Latitude, being taken from $90^d.$ leaveth $51^d. 30'.$ the true Latitude required.

PROP. III.

To finde the Suns Declination, any houre of the day or night.

You are to take notice that the following Table is calculated according to the place of the Sun in the Ecliptick every day at noon, and ſome may have occaſion to know the Declination at ſome other intermediate houres of the day, which is conſiderable when the Sun hath ſwift Declination, and may thus neerly be found.

If it be in the afternoon, that you require the Declination of the Sun, you muſt take the Suns Declination for that day, and the day following, out of the Table; and ſubſtract the leſſer of them from the greater, ſo ſhall you have the difference, and with this difference worke by proportion. *Example,*

February the 10 1649. I deſire to know the Suns Declination at 4 in the afternoon,

	d	′
The Suns Declination *February* 10 at noon is	10	38
The Suns Declination *February* 11 at noon is	10	16
The difference is	00	22

Then ſay by the Rule of Proportion, If 24 houres, give 22 minutes; what ſhall 4 houres give? multiply and divide, you ſhall finde $3'. 40''.$ to be ſubſtracted from $10^d. 38'.$ (becauſe the Declination decreaſeth) and the remainder will be $10^d. 34'. 20''.$ the Suns true Declination on the 10 of *February*, at 4 of the clock in the afternoon. But if you had required the Suns Declination for any houre before 12 at noon, you muſt have taken the difference between that day, and the day fore-going, and accounted the houres from the precedent noon.

A Table of the Suns Declination in Degrees and Minutes exactly rectified to the Meridian of *London*, for the first six Moneths of this Yeare, 1649.

Dayes.	January		Febru.		March.		Aprill		May.		June.	
	D	*M*	*D*	*M*	*D*	*M*	*D*	*M*	*D*	*M*	*D*	*M*
1	21	44	13	46	3	24	8	36	18	6	23	12
2	21	34	13	26	3	0	8	58	18	20	23	16
3	21	24	13	5	2	37	9	20	18	35	23	19
4	21	13	12	45	2	13	9	42	18	50	23	23
5	21	2	12	25	1	49	10	3	19	4	23	25
6	20	50	12	4	1	25	10	24	19	18	23	27
7	20	38	11	43	1	2	10	45	19	31	23	29
8	20	26	11	21	0	38	11	6	19	44	23	30
9	20	13	11	0	0	14	11	27	19	57	23	31
10	20	0	10	38	0	10	11	47	20	10	23	31
11	19	46	10	16	0	33	12	7	20	22	23	31
12	19	32	9	54	0	57	12	28	20	34	23	31
13	19	18	9	32	1	21	12	48	20	45	23	30
14	19	3	9	10	1	44	13	6	20	56	23	29
15	18	48	8	48	2	8	13	27	21	7	23	28
16	18	33	8	25	2	31	13	46	21	17	23	26
17	18	17	8	3	2	54	14	5	21	27	23	23
18	18	1	7	40	3	18	14	24	21	37	23	21
19	17	45	7	17	3	41	14	42	21	46	23	17
20	17	28	6	54	4	5	15	1	21	55	23	14
21	17	11	6	31	4	28	15	19	22	9	23	10
22	16	54	6	8	4	51	15	37	22	12	23	5
23	16	37	5	45	5	14	15	54	22	20	23	1
24	16	19	5	21	5	37	16	12	22	27	22	55
25	16	1	4	58	6	0	16	29	22	34	22	50
26	15	42	4	34	6	22	16	46	22	41	22	44
27	15	23	4	11	6	45	17	2	22	47	22	37
28	15	5	3	47	7	7	17	18	22	53	22	31
29	14	45			7	30	17	34	22	58	22	23
30	14	26			7	52	17	50	23	3	22	16
31	14	6			8	15			23	8		

A Table of the Suns Declination in Degrees and Minutes exactly rectified to the Meridian of *London*, for the six last Moneths of the Yeare, 1649.

Dayes.	July		August		Septe.		Octob.		Nove.		Decem.	
	D	M	D	M	D	M	D	M	D	M	D	M
1	22	8	15	12	4	24	7	15	17	40	23	9
2	22	0	14	54	4	1	7	38	17	56	23	13
3	21	51	14	36	3	38	8	0	18	12	23	17
4	21	42	14	17	3	15	8	22	18	28	23	20
5	21	32	13	59	2	52	8	45	18	43	23	23
6	21	23	13	39	2	29	9	7	18	58	23	26
7	21	12	13	20	2	5	9	29	19	13	23	28
8	21	2	13	1	1	42	9	51	19	27	23	30
9	20	51	12	41	1	19	10	13	19	41	23	31
10	20	40	12	21	0	55	10	35	19	55	23	31
11	20	28	12	2	0	32	10	56	20	8	23	31
12	20	16	11	41	0	8	11	17	20	21	23	31
13	20	4	11	21	0	16	11	38	20	34	23	30
14	19	51	11	0	0	39	12	0	20	46	23	29
15	19	39	10	39	1	3	12	21	20	58	23	27
16	19	25	10	18	1	26	12	41	21	9	23	25
17	19	12	9	57	1	50	13	2	21	20	23	22
18	18	58	9	36	2	13	13	22	21	31	23	19
19	18	45	9	15	2	37	13	42	21	41	23	16
20	18	29	8	53	3	0	14	1	21	50	23	12
21	18	14	8	31	3	23	14	21	22	0	23	7
22	17	59	8	9	3	47	14	41	22	9	23	2
23	17	44	7	47	4	10	15	0	22	17	22	56
24	17	28	7	25	4	34	15	19	22	25	22	51
25	17	12	7	3	4	57	15	37	22	33	22	44
26	16	56	6	41	5	20	15	55	22	40	22	37
27	16	39	6	18	5	43	16	13	22	46	22	30
28	16	22	5	56	6	6	16	31	22	53	22	22
29	16	5	5	35	6	29	16	49	22	58	22	14
30	15	48	5	10	6	52	17	6	23	4	22	5
31	15	30	4	47			17	23			21	56

By the precedent Rules and Table, you may make Tables of the Suns Meridian Altitude, which will be of extraordinary uſe to finde the variation of the Compaſſe at Sea, and a Meridian Line on Land, but of theſe things hereafter, in a more convenient place.

The houre of the day at London *being given, to finde what houre it is in moſt of the principall Cities in the World.*

In the laſt columne of the following Table, you have the difference of Meridians between *London*, and any of thoſe places mentioned in the firſt columne, unto which difference of Meridians are annexed theſe letters, a and s ſignifying, Adde and Subſtract. Now for an *Example*. *At 50 minutes paſt 2 in the afternoon at* London, *I demand what of the clock it ſhall be at* Hieruſalem *at that time?*

I finde *Hieruſalem* in the firſt columne, and in the laſt I finde, 3 houres 3 minutes a, which ſheweth that I muſt adde 3 houres and 3 minutes to the time at *London*, and that ſhall give me the true houre of the day at *Hieruſalem*, which is 5 of the clock and 53 minutes paſt: Alſo at *Naples* in *Italy*, at the ſame time, it will be 6 minutes paſt 4 of the clock. The like is to be done for the Change, Full, and Quarters of the Moon.

A Table shewing the Bearing, Distance, Latitude, and difference of Meridians, of diverse principall places in the World, from the City of *London*.

The names of the Places.	The way they beare.	their distance	Latitude. D	′	Differ. Merid. H	′	
Alexandria in Ægypt	S E by E	2169	30	58	2	42	a
Antioch	E S E	2319	37	20	3	16	a
Antwerp in Brabant	East ferè	248	51	12	0	24	a
Athens	S E by E	1624	37	42	0	56	a
Babylon	E S E	2724	35	00	3	56	a
Barwick	North ferè	267	55	50	0	02	a
Calecute in India	S E by E	5114	11	20	6	08	a
Carlile	N N W	224	54	50	0	09	s
Cambridge	N by E	44	52	17	0	02	s
Calice in France	E by S	86	50	30	0	09	a
Constantinople	E S E	1547	43	05	2	24	a
Dublin in Ireland	N W by W	296	54	40	0	29	s
Damascus	E S E	2404	33	00	3	16	a
Edinburgh	North	328	56	26	0	00	
Ephesus	E S E	1808	37	40	2	30	a
Florence	S E	202	43	10	0	57	a
Hamburgh	E N E	538	55	42	0	56	a
Hierusalem	S E by E	2352	32	10	3	03	a
LONDON			51	32			
Naples in Italy	S E by E	1051	40	42	1	16	a
Ninive	E S E	2635	35	50	3	52	a
Oxford	N W	47	51	50	0	5	s
Prague in Bohemia	East ferè	700	50	06	1	14	a
Paris in France	S S E	215	48	40	0	13	s
Quinzay	E by S	7272	37	40	11	28	a
Rome, caput Italiæ	S E by E	887	42	00	1	07	a
Red Sea.	S E by E	2336	29	50	2	54	a
Venice	E S E	744	45	15	1	03	a
Yorke	North	150	53	50	0	00	

POSTSCRIPT.

Courteous Reader,

THere is a Booke now in the Presse (if not already publisht) Entituled, *Urania Practica*, or *Practicall Astronomy*, in six Parts. Containing,

I An explanation of the vulgar Notes used every Year, with the order how to finde them for ever, both in the *Julian* and *Gregorian* Accompts, both Arithmetically and Speculatively, by new invented Tables.

II An *Ephemeris* of the Sun and Moon for 19 Years, beginning, *Anno* 1648, and ending, *Anno* 1667, with other Astronomicall Rules and Tables (not hitherto published by any) to calculate the Places, Conjunctions, Oppositions, and Eclipses of the Luminaries for any time, past or to come: With exact types of all the Eclipses both Solar and Lunar, that will be visible in *England* these 19 Years: Also excellent Rules to finde the Rising, Southing, and setting of the Moon.

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of the Sun and Stars, in severall Latitudes, by Trigonometricall calculation. Unto which is added diverse other Rules and Tables, fitting to be known, and of ordinary use with every man.

All the precedent particulars have been compared with the best approved Authors and Observations, and made more compendious and fitter for practice then any hitherto published: Nothing in the like nature being yet extant in the English Tongue.

By { VINCENT WING, and WILL. LEYBOURN, } Practitioners in the Mathematicks

But I cannot insist upon particulars in this place, having already exceeded my confined limits, wherefore I refer you to the Book it selfe, which (if not abroad already) you may sodainly expect, and whereas the price will be very small, so the use thereof will be exceeding great.

London, die *Veneris*, *Junii* 2, 1648. *Vale.*

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